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Journal Jottings

No one questions the seriousness of coronary heart disease. What one may be entirely justified in questioning is the constant flow of articles and reports on its cause and prevention. Do we scratch eggs from the menu? Yes, may say one report; no, may say another. Ignoring for the moment the cost, do we forego a roast of pork for Sunday dinner, which bottle of cooking oil should we reach for from the grocery shelf; should we buy margarine

or can we use butter? I like milk for lunch. Must I drink skim when I prefer homogenized? Linda Jacob's article in this issue isn't going to answer these questions — that's not the purpose of her piece, although she has some interesting and, I think, sensible comments to make on moderation in one's eating habits — but it is an indepth look at the entire problem. Well worth reading, and I hope that this subject can be dealt with again in future issues of the Journal.

One of the interesting aspects of my job is the opportunity to work with a wide variety of subjects. This issue is a good example. There is little similarity between coronary heart disease, women's lib, and healthy calves, but they are the topics under discussion in this month's issue. I'm sure you'll find them of interest.

Hazel M. Clarke

Editorial

The initial clamour over the shortage of beef and the high prices of food seems to have died down a bit. The front pages of newspapers no longer are featuring stories about impending food shortages as they did only a few weeks ago.

Perhaps this is only natural. People's reactions to such things as the food or energy situation seem to follow a rather predictable pattern. First of all, people seldom seem to become actively concerned and ready to take action until a situation seems to be approaching a crisis dimension. Food prices were gradually inching upwards over a several month period early last summer. But it wasn't until a sudden price increase and temporary shortages of food appeared that people began to demand quick and drastic action from the government. This pattern of reacting only to crisis is really no different from what happened two years ago during the environmental quality crisis.

Secondly, it appears that such crises hold people's attention for a relatively short period of time. It seems to take a really unusual event to hold people's

attentions and interests for longer than a few months. By then some other new crisis comes along and the news media begin directing people's attention to this new issue, not because it is necessarily more important but because it is news, and news is what the press has to sell in order to survive.

Aside from the possible benefit of relieving tension in people's minds by creating the illusion that the crisis is disappearing or solving itself, there is the danger that people can be led to believe that the problem has been solved when it really isn't true. And this is what appears to be happening in the food issue. Prices of meats have been dropping but not to their previous levels. It is likely going to take several years before food production and consumption begin to stabilize on a national level. As for the worldwide situation, it will take much longer, if it ever happens at all.

We at Macdonald realize that the food crisis has not subsided but is still with us. In order to re-

emphasize this point and prevent the public from developing a false sense of security over the decreased coverage in the news media, we are planning to devote our annual Macdonald Farm Days on October 20 and 21 to the topic of the importance of agriculture in the Canadian and worldwide economy. We feel there will never be a better opportunity for agriculture to sell itself to the urban public than the present time. While most of our readers realize the importance of agriculture, there are many people in the Montreal area who have never even been on a farm before. It is this large group of people whom we feel we must reach with our story. We invite all of you to come to Macdonald in October and help us with this very important task.

Gordon Bachman

Questioning the Answers

Slowly but surely food prices have moved front and centre as a vital issue in Canadian life. In the three years between January 1969 and January 1972, overall consumer food prices increased by nine per cent. In the three months between last December and mid-March, meat prices alone increased as much as 15 per cent in the Montreal area. At the same time per capita consumption of beef in Canada now stands at more than 90 pounds a year, almost double what it was 20 years ago. All this is occurring at a rate which parallels the disclosure of new warnings about the dangers of high protein and fat diets in relation to coronary heart disease.

Over 60 years ago it was shown that there was a relation between the level of cholesterol in the blood and the condition which had just been discovered: atherosclerosis. Today nutrition in relation to atherosclerosis is one of the major problems in adult medicine. At the beginning of this century Western man's life expectancy was only about 45 years. Pneumonia and other infections were the major cause of death. Now with infectious disease reduced, life expectancy from birth has increased to over 70 years, with atherosclerosis accounting for 50 per cent of mortality.

From Beginning to End:

For most people, atherosclerosis can be regarded as an aging process. We know that the heart muscle receives its oxygen and nutrients through two blood vessels, the left and right coronary arteries. If one of these arteries becomes blocked or critically

narrowed, the areas of the heart beyond the blockage, or occlusion, will die and a heart attack will ensue. The cause of the blockage in a heart attack is almost always a condition called atherosclerosis (a type of arteriosclerosis, or hardening of the arteries). This is a disease process in which a fatty substance is deposited on the artery wall, thereby progressively narrowing the passage. The deposit is referred to as an atheroma (from the Greek word atheros meaning 'mush') or plaque, and contains fat, cholesterol, calcium, and other substances. This narrowing is important because it can choke off blood supply, often to areas of the heart or brain. Or, parts of the fatty plaques may break loose to become clots travelling in the circulatory system. These clots can jam up at a narrowed part of an artery and cause a sudden heart attack or stroke. However, this process is slowly progressive from early infancy, and it is only after 50 years that the clinical disease usually becomes apparent.

To estimate the degree and extent of atherosclerosis is quite difficult. Its presence is usually only made evident after the appearance of an obvious complication involving an artery, as in infarction. Evidence of reduced blood flow to an area is a helpful sign; reduced pulsations in the limbs of adults past middle age suggests the presence of atherosclerosis; reduced kidney function with hypertension of relatively sudden onset should suggest, among other things, renal artery narrowing. Impaired memory, emotional instability and changes in intellectual capacity may occur before a frank stroke, although these are unreliable signs of

cerebral artery atherosclerosis. The postmortem examination is reliable, but unhappily late.

What Causes All This?

No concept of a single cause for coronary heart disease has stood the tests of time or experimentation. Atherosclerosis seems to be a disease of multiple causation in which the various factors may have different relative values in different individuals and populations. Ecologically, atherosclerosis is a disease that results from a multi-faceted interaction between the organism and environment. The cause of this disease may be viewed as endogenous as compared with the more familiar exogenous microbiologic, chemical, or biochemical agents responsible for infection, allergy, and poisoning. Since the cause of atherosclerosis appears within the host, this question arises: which factor should be considered the agent and which factor the host response? The lesions develop in a two-phase system involving the lining of the artery and the plasma. Some relevant factors include the lipids and proteins of plasma and the polysaccharides involved in clearing lipids from the blood. Great interest has developed in the lipids of plasma as causative agents since the feeding of dietary cholesterol to some experimental animals has been shown to cause atherosclerosis with features similar to those in man. It seems unlikely, however, that plasma lipids *per se* are responsible for these lesions. Essentially no free lipid is present in the plasma; it is found in various

combinations with protein. Thus the physiologic form of all plasma lipids is a lipoprotein complex.

As a result of animal experiments, clinical observations, and laboratory research, a formidable array of evidence has accumulated linking lipids, notably cholesterol and triglycerides, to coronary disease. Cholesterol is a waxy material used in many of the body's chemical processes. Everyone requires it in correct amounts for good health, but too much cholesterol in the circulation encourages the development of heart and blood vessel diseases. Cholesterol is obtained in two ways: it is manufactured in the body from all foods and is derived directly from foods of animal origin. A number of discrepancies in the relationship between these factors and coronary heart disease can be accounted for when the intake of animal fat rather than total fat is considered. These findings give rise to the concept that a high intake of dietary fat, particularly animal fat, produces a high serum cholesterol concentration, and that this in turn predisposes to the development of coronary disease. If one accepts this evidence in favour of the view that these lipoproteins may be considered the agent for atherosclerosis, all other factors known to be involved in the etiology may be viewed to determine whether they influence the concentration of the lipoprotein in the plasma or whether they influence the reactivity of the arterial wall to the lipoprotein complex.

The most important etiologic factor seems to be elevation of blood serum lipoproteins. Within a narrow serum cholesterol range, 208-245 mg.%, prevalence rate of coronary heart disease doubles. This suggests that even a slight decrease in serum cholesterol in the general population might have an important effect on mortality.

In theory, the factors which might produce increased serum lipoproteins are: (1) excessive ingestion of nutrients which stimulate lipoprotein synthesis such as organ meats, shellfish, fried and fatty foods, cream, rich cheeses, etc.; (2) slow removal of triglycerides from the blood; (3) slow liver breakdown of cholesterol to cholic acid, and (4) excessive fluctuation of free fatty acids, a constituent of all fats, stimulating synthesis in the liver of more lipoprotein.

The Present Solution:

Thus it seems that the diet will play a vital role in the development and/or prevention of atherosclerosis. Several dietary factors raise blood lipids and these may be important in different individuals. First, it is well recognized that excessive calories of any kind tend to raise serum lipid. Uncomplicated obesity *per se* may carry no increased risk of atherosclerotic disease, but since, as a group, obese persons have an increased incidence of hypertension, diabetes mellitus and sudden death, it is an undesirable health hazard. Physical activity and cigarette smoking also cannot be clearly related to atherosclerosis and if they play a role, it is probably secondary to many other factors.

The dietary constituent most exclusively studied to date is dietary fat. Specific studies have established that there is a relation between the intake of dietary fat, serum cholesterol concentration and mortality from coronary heart disease. These reports can show simple relationships, but their ability to prove cause and effect relationships is questionable because of many uncontrollable and often unsuspected factors. In such studies the number of subjects is limited, their 'healthy' state variable, duration of study short, and often intake of food at home unreliable. On the other hand, the information they do expose is valuable if viewed in the proper perspective.

Both the quality and quantity of fat in the diet are important. In the 1950s it was established, and since warmly reviewed, that the effect of dietary fat on serum cholesterol concentration is dependent not on whether it is of animal or vegetable origin alone, but on its fatty acid composition. The fat of land animals, which contains mainly saturated fatty acids, will elevate serum cholesterol concentration when substituted at an equal calorie level for carbohydrates. Such fats are found in beef, lamb, pork, and ham; in butter, cream, and whole milk, and in cheeses made from cream and whole milk. Fats from fish, containing a high proportion of unsaturated fatty acids will lower serum cholesterol concentration when similarly substituted. Vegetable fats, like sunflower seed oil, safflower and maize oils, which contain predominantly unsaturated fatty acids, will lower serum

cholesterol concentrations. Coconut oil and peanut oil have the opposite effect. In most fat controlled, low cholesterol diets, egg yolks and organ meats (very high in cholesterol), and shellfish (moderately high), are restricted. Foods of plant origin such as fruits, vegetables, grains and cereals are therefore recommended due to their low cholesterol content.

This property of some dietary fats to lower these serum values is not dependent on their content of unsaturated fatty acids alone but on the content of polyunsaturated fatty acids. Olive oil, for example, composed mainly of oleic acid, a monounsaturated fatty acid, has no effect on serum cholesterol concentration. The most common polyunsaturated fatty acid found in the diet of man is linoleic acid, which lowers serum cholesterol concentrations. The total effect of the various dietary fats on serum lipid levels is additive, such that the effect of any change can be predicted from an analysis of the diet. The main hypercholesterolemic factors are saturated fatty acids and cholesterol while polyunsaturated fatty acids lower serum cholesterol values. However, two grams of polyunsaturated fatty acid are required to neutralize the effects of one gram of saturated fatty acid, so that the polyunsaturated/saturated ratio of the diet must be two or greater to achieve a lowering of serum lipids. This can only be done by eliminating dairy fat and eggs, limiting meat to a minimum and adding sufficient polyunsaturated oils.

Great Strides . . . More Interpretations:

Many objections have recently been raised against this, for there are still some reports which suggest little or no correlation between dietary fat, cholesterol and heart disease. A recent, thorough review paper has criticized the research in this area dating back to 1914. Through it, one comes to realize that the concept regarding high saturated fat diets and high serum cholesterol have been so often stated with positive assurance that it is accepted as fact, not only by the public and practicing physicians, but even by competent investigators. A common practice has been to refer to secondary or tertiary sources, each taking the last on faith, thus leading to a matter-of-fact acceptance of a phenomenon that requires much more research. Such advice, to reduce saturated and animal fat ingestion, runs the risk of such consequences as extremism and unbalanced diets. Moderation is the key to protect both the consumers and manufacturers. We must be aware that there are two sides to this issue, and that the cause and effect relationships have not been elucidated.

As an alternative to fat it has been hypothesized that simple sugar may be the culprit responsible for atherosclerosis. Initially this was based on the fact that the increase in this disease process and the increase in sugar consumption have

been parallel over the past two centuries. In 1840 per capita consumption of sugar was only around seven pounds a year. It went up to about 60 pounds by the turn of the Century, to 100 pounds by the end of World War II, and it is now up to 120 pounds. One can also read of differences in the incidence of coronary heart disease in, for instance, two undeveloped countries; the one which has a large consumption of sugar having a higher death rate. On the other hand the people who eat large quantities of fat and practically no sucrose, not unlike our early Eskimos, have no atherosclerosis.

Some trials with human subjects have shown impaired glucose tolerance associated with high sucrose diets as compared to a starch diet. An increase in serum cholesterol was associated with decreased glucose tolerance, and a low sugar diet, like the low saturated fat diet, was seen to reduce serum cholesterol. None of this data provides conclusive proof that excess sucrose causes atherosclerosis. Like the data linking dietary fat and atherosclerosis there are inconsistencies and contradictions associated with the hypotheses.

There can be no doubt that carbohydrates and lipids can contribute to atherosclerosis, **in the measure** that they produce a rise in serum lipoprotein. But considerable doubt does exist as to whether either of them are the cause of the disease. The cause

of the disease process, which might be called premature aging, has proven elusive due to its many contributing factors. Certainly the variation in individual response to experiments testing correlations of a multitude of factors with atherosclerosis suggests that only those people who are susceptible respond by developing the disease, or parameters consistent with it. Perhaps to date we really have been dealing with only the contributing factors.

Thus, a generalized concept of the disease may be a combination of genetics, age, sex, occupation, physical state, and emotional status as well as diet, and while various stress conditions accelerate the process, a key unknown element is necessary for its fruition.

What Happens Now?

The precise bearing of sugar or fat intake on coronary disease is questionable. The average North American diet is rich in animal fat compared to developing countries, and in North America there has been an increase in the consumption of sugars in the past few decades. Some replacement of complex carbohydrates with simple sugars has also occurred. Some relationship does exist, perhaps due to their effects on serum lipids as suggested by many workers, but any simple hypothesis linking any one risk factor with such a complicated and multifactorial problem is difficult to accept. More research is needed to prove or disprove the propositions here

presented. Speculation from inadequate information is always far easier than laborious field studies, especially when they are of the type that do not lend themselves to instant answers.

In the meantime, it is important that we, the consumers, and possible victims of heart disease, do not become alarmed by the excess advice provided by every known medium of communication: radio, lectures, television, magazines, and newspapers. A guideline for natural good health and preventative nutrition is moderation in all things. Do not wipe eggs from your shopping list, but neither eat four a day. Do not change completely from butter to margarine for both contain the saturated fatty acids (unless specially marked), rather, incorporate polyunsaturated oils into cooking too. Instead of avoiding pork and beef — for reasons other than cost — form a habit of variation in choices of meats purchased, alternating with fish and poultry. And avoid excess intake of sweets for reasons of weight and dental health, not just the blood cholesterol scare.

A return to good nutrition will prevent many diseases and allow us to live better longer!

Linda Jacobs,
M.Sc. Nutrition Student,
Department of Animal Science.

Mr. Eugene Whelan at Macdonald College

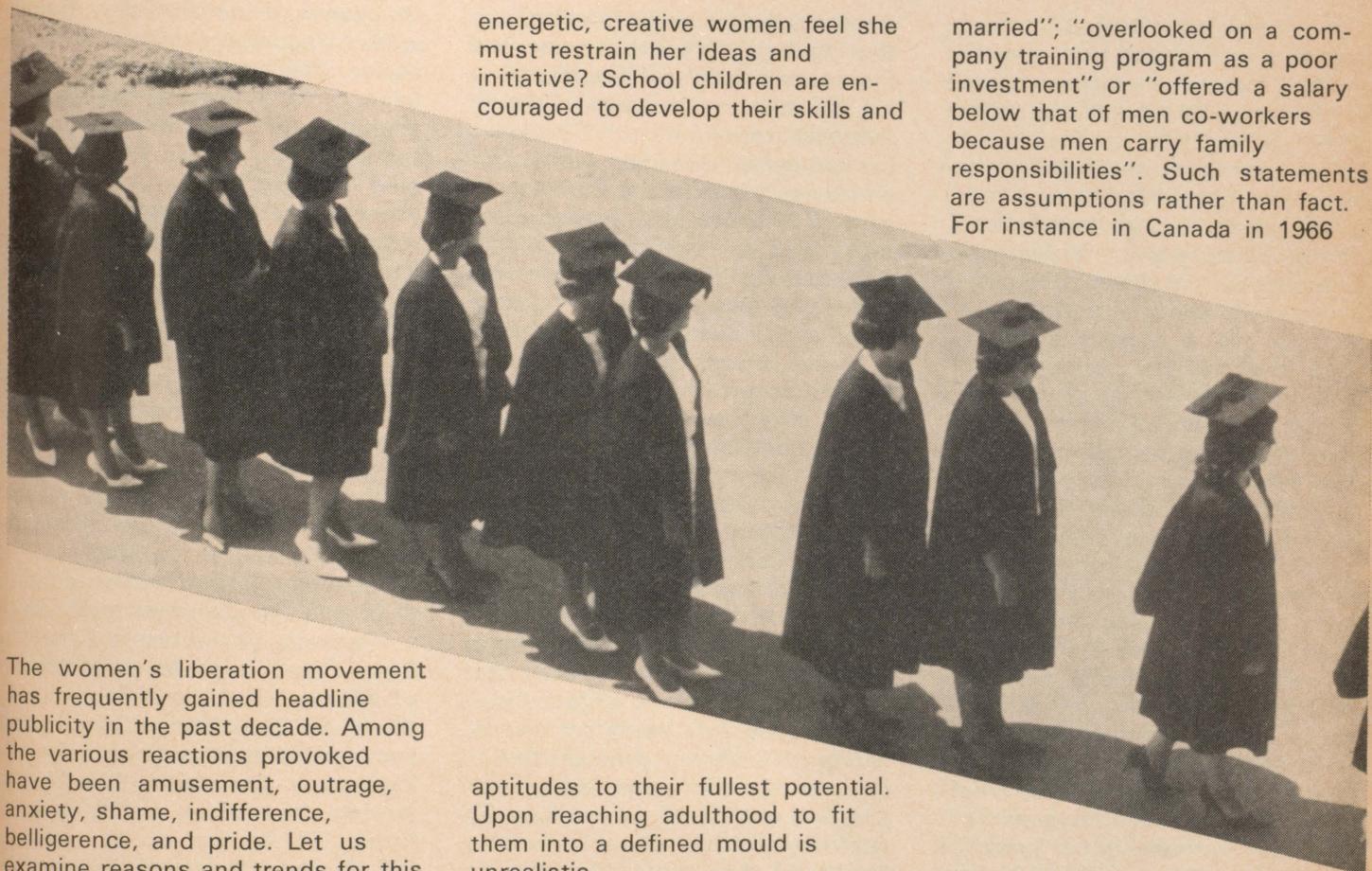
The Hon. Eugene F. Whelan, Minister, Canada Department of Agriculture, will address the Quebec Farmers Association annual meeting held this year on October 11 at Macdonald College in Ste. Anne de Bellevue. The Minister will speak on various Federal policies as well as stressing the opportunities in Canada's agriculture of tomorrow. The Q.F.A. feel that this is an opportune moment to improve communications between the Canada Department of Agriculture and the farmer. We are therefore launching an open invitation to all agriculturalists in this province; plan an outing with the family and friends and come to Macdonald.

Date: October 11, 1973

Time: 2:30 p.m.

Place: Assembly Hall, Main Building, Macdonald College, Ste. Anne de Bellevue.

Trends and Traumas of Canadian Working Women



The women's liberation movement has frequently gained headline publicity in the past decade. Among the various reactions provoked have been amusement, outrage, anxiety, shame, indifference, belligerence, and pride. Let us examine reasons and trends for this shift in women's life styles.

Many visualize the ideal feminine personality as agreeable, charming, patient, devoted, and submissive, while they expect men to be emphatic, ambitious, aggressive, decisive, responsible, and reliable. These images expect men to master the highly regarded qualities that represent strength of character while women are seen as sweet, supportive, and timid. Since temperament is not sex-bound, it is unfair to everyone to cast individuals into such moulds according to their sex. Why should a passive, unassuming man feel guilty because he is not forceful? Why should an

energetic, creative woman feel she must restrain her ideas and initiative? School children are encouraged to develop their skills and

aptitudes to their fullest potential. Upon reaching adulthood to fit them into a defined mould is unrealistic.

In their zeal for equality and freedom of choice, the women's liberation movement have frequently overstated their case until it became discriminating against men. This emphasis was probably necessary to command attention; a reasonable approach might have been politely acknowledged and promptly ignored. Their militant rebellious stands, which most Canadian women did not condone, left much of the general population unsympathetic. However, many women were reminded of personal experiences such as being "discouraged from taking physics since they were just going to get

married"; "overlooked on a company training program as a poor investment" or "offered a salary below that of men co-workers because men carry family responsibilities". Such statements are assumptions rather than fact. For instance in Canada in 1966

Highly educated women are found to be the least content in only the homemaking role. What will these young women's future be?

about one tenth of the families were headed by one parent only. Of these single parents over 80 per cent were women⁽¹⁾. Two parent families, of course, have a woman as well as a man contributing actively.

The fact that many young women want more than the wife and mother role, which was fulfilling for their mothers and grandmothers, puzzles some people. But ask yourself, how many young men want to follow in their father's or grandfather's footsteps?

Our society has changed in the last two generations from a productive society where most people were engaged in producing "their thing" either alone as the homemaker or in small groups as in light industry. Technology and mechanization has removed most of the individual's intellectual input in production. Society is becoming increasingly consumer-oriented. For example, a homemaker who used to spend time, effort, and thought in developing sewing or baking skills now finds that ready-made clothes and cake mixes give her similar results with less time and effort but require more money. It also removes the satisfaction she derived from her personal achievement. Ironically, since the homemaker only realizes financial rewards for her working efforts outside the home, she often feels this is the only way of reaching her goals. Recently, the economist Dian Cohen published a substantiated estimated salary of \$20,000 per year for the services a woman performs in her home for a family of four.⁽²⁾ For this, her remuneration is her family's gratitude and the low status of "homemaker" in society.

Ever increasing educational opportunities are available and sought by many women as well as men who wish to prepare themselves for meaningful employment and financially attractive positions. Highly educated women are found to be the least content in only the homemaking role.

Thus the financial need, the lowly position of the homemaker, the desire for psychological fulfillment, the educational development, the

trend towards smaller families, the increasing life expectancy, and the mechanization of housework are the main reasons behind the fact that from 1961 to 1971 the percentage of Canadian women employed jumped from 28.7 per cent to 36.5 per cent. This rises to over 39 per cent in Ontario, British Columbia, and Alberta, the centres of great economic development and industrialization, while it hovers around 30 per cent in more rural provinces where it would seem more satisfying to follow traditional patterns.⁽³⁾

The principal source of these increased employees is the married woman. Concern has been expressed of possible repercussions of such a movement on the quality of child care in the family. There is beginning to be some evidence that this concern may be unfounded. For instance, in a study on food habits of Canadian children, the children of working mothers were found to eat breakfast and have a sit-down evening dinner more frequently than those whose mothers did not work outside the home.⁽⁴⁾

Child psychologists have repeatedly said that the quality of time spent with children is far more important than the quantity; therefore the hours a working mother spends away from home could be fully compensated by a better attitude during family hours. Children of working parents, however, have been found to develop independence and responsibility at a much earlier age, a universal objective to child rearing in North America. There are exceptions. But are they due to the mother's work or are they simply due to poor quality of parenting?

Of course, many Canadian women work of necessity rather than by choice. The increasing rate of family breakdown and high rate of unemployment has left many as the sole breadwinner. The rising cost of living has required many wives to work to maintain the living standard which the family has adopted. The high value placed on education has seen many a mother work to see young people through university.

Whatever the reasons, the trend is obvious. As the numbers grow society will have to rectify some of the inequalities faced by many women in the labour force. Discriminations in educational and occupational opportunities, conditions and remuneration exist as pointed out by the recent Canadian Royal Commission on the Status of Women. The Vice-Chairman of the U. S. Civil Service Commission summarized most women's feelings when she stated "Working women are seeking dignity and justice."⁽⁵⁾ As this occurs, women will assume their rightful place in the labour force.

Prof. V. Shipley,
School of Food Science

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Care of the Newborn Calf

With the recent great increase in the price of a newborn calf and with its inherent value to the owner in the future of his herd, it has become increasingly important to ensure its survival.

The best place to start is protecting the calf before birth. This can be accomplished by ensuring the dam has adequate nutrition including energy and protein. A word of caution here, it is essential that the cow be in good condition but not too fat or she may have difficulty in calving and will be more likely to come down with Ketosis. With the increase in high moisture corn silage fed to cows, and especially because of the poor condition of the hay harvested last year, it will be beneficial to inject the dams every 60 days with a Vitamin ADE preparation. It has been found in the United States that double the dosage of Vitamin A two weeks before calving has decreased the incidence of retained placentas.

There are two viral diseases that the dam can be vaccinated against while pregnant which will protect the cow against abortion and give passive immunity to the calf. These are Infectious Bovine Rhinotracheitis (IBR) and Para Influenza 3 (PI3). If the dam is in calf an intranasal vaccine must be used or the cow may abort. If the dam is vaccinated for these two diseases, the calf will get passive protection from the colostrum of the dam. This must be done at least three weeks before calving so the cow will have a chance to manufacture antibodies against these two diseases and then pass them in the colostrum to the calf. If the cow is

closer than this to calving, one may wait until the calf is four to seven days of age then vaccinate the calf intranasally against IBR and PI3. This will give it protection against these two diseases and some other viruses because of production of interferon. This is a substance produced in the body against viruses, the mechanism or action of which has not been clearly established.

Recently, another virus has started to afflict calves shortly after birth (in some cases less than one day of age). This is a Reovirus (Nebraska virus), as it was first discovered in Nebraska. The morbidity and mortality are very high when young calves contact this virus. The calves have a watery, greyish mucoid stool and become dehydrated very quickly. Death may come rapidly. This disease is difficult to distinguish from Colibacillosis and it would be beneficial to call your local veterinarian to differentiate the two diseases. To determine if one has this virus on his premises, an owner should have his veterinarian collect feces in a clean jar within five hours of the beginning of the scours, and he will forward them to a laboratory. There is a vaccine available for this disease in the U.S. which is given to the calf as soon as it is born. This vaccine is not yet registered for use in Canada.

One can collect the calf as soon as it is born and isolate it away from calves in another building and thus prevent it from coming in contact with the virus which

very quickly becomes ubiquitous (all over your barn). If one can at the same time move the calves which have the virus to another area (never mix the newborn calves and the ones which have the Nebraska virus) and clean and disinfect the calving area, an owner can break the cycle and eliminate the virus from the herd (we have managed to do this at Macdonald College).

For the calf that has the Nebraska virus several things will help the animal. Providing a heat lamp is most beneficial. The administration of antibiotics both oral and parenteral, will also assist the calf in fighting secondary bacterial invaders although they will not work against the virus. A farmer should consult his veterinarian to administer antibiotics that are effective and perhaps to provide electrolyte therapy.

By far the greatest cause of calf mortality in the past . . . and at present . . . is Colibacillosis or White Scours. This is caused by a bacteria called *Escherichia coli*. In all cases where a serious problem exists, the owner should consult his veterinarian as to the procedure to follow to control this disease as it will vary for each individual farm.

There are a few general principles which one can follow to keep the disease to a minimum. First of all ensure the calf gets colostrum from the dam within 12 hours (actually the sooner the better) as with increasing time after calving there is less antibody absorbed by the calf from its intestine. After 12 hours next to none is absorbed. Keep the pens

clean and dry and clean out manure frequently from the stalls. Ensure that the ventilation is adequate. When you remove the calf from the mother, if the weather is cold, it may be advantageous to provide a heat lamp for the calf for a few days. Do not mix newborn calves with older calves; they cannot compete and will pick up infections to which older calves are resistant.

Calves should be fed at least twice daily and never over 5 per cent of their body weight at each feeding. At the first sign of scours the owner should immediately cut back on the amount of milk fed, i.e., to one or two pounds per feeding. If the scours do not stop by this procedure, the calf should not be fed milk for at least 12 hours (perhaps 24 hours), but water should be provided at all times. If the calf is not drinking, water should be drenched frequently but care must be taken so that the calf does not get pneumonia from aspirating the water. Antibiotics should be administered if the Colibacillosis is severe enough that milk has to be withheld and it is at this time a veterinarian should be called so that he can further advise the owner. He will determine if it is necessary to administer electrolytes and give further treatment. It is beneficial to provide calves with a high energy grain ration and a few tufts of good hay to munch on starting at about a week of age so that they will eat it as soon as their appetite for something besides milk is established. Once calves start consuming solid food the incidence of Colibacillosis is greatly decreased, and I feel it is an excellent idea to have them start as soon as possible. One must,

however, make milk the main part of their diet for a considerable length of time.

Recently, there has been an interest in feeding colostrum as normally it goes to waste. This can be quickly frozen or, as more recently, people are fermenting the colostrum. Either idea is good but when fermenting the milk one must feed colostrum to calves of near the same age as the calf from whose mother the colostrum was taken. It is imperative that *E. coli* does not get into the colostrum when it is fermenting or the chance of scours will increase.

One must be careful when taking the colostrum that one does not cause the dam to come down with milk fever by a too rapid depleting of milk and hence calcium. Therefore, watch your cow carefully.

If a farmer is going into a milk fed vealer operation, the problem will be compounded and more intimate and detailed advice should be sought on disease prevention as diseases are much more prevalent in this type of enterprise.

L. J. Martin, D.V.M., M.Sc.,
Animal Pathology Laboratory.



The future of a farmer's herd is dependent upon healthy calves.

The Family

Farm

Published in the interests
of the farmers of the province
by the Quebec Department of
Agriculture and Colonization

Plant Productions in Quebec and their Place in the Agricultural Economy

(Text of an address by Mr. Gaétan Lussier, Deputy Minister of Agriculture of Quebec to the Canadian Fertilizer Institute at the Manoir Richelieu on August 23, 1973.)

In general, livestock productions can be described as well launched in Quebec and, genetically speaking, we may claim to have made big strides in that field. By reason of its geographical situation the province has a so-called temperate climate which is favourable to grasslands.

Given this potential, dairy farming has quite naturally become established on a very large scale, in fact to such an extent that, at the time of the statistical survey, there were a million dairy cows producing about seven billion pounds of milk a year.

In addition, according to the latest figures, Quebec was producing annually 1,945,000 calves and cattle, 1,185,000 hogs, 98,000 sheep and lambs, about 330,918,000 pounds of poultry meat, and 78,385,000 dozen eggs. This means that, as regards self-sufficiency in livestock productions, Quebec's situation is now as follows:

All dairy products — 131.8%

Beef cattle — 25%

Hogs — 73%

Poultry meat — 105%

Eggs — 67%

Thus, on the whole — except for beef, in which we are markedly

deficient — the province has succeeded in developing its livestock productions well. Furthermore, our livestock is healthy and of good quality.

This last statement is borne out by the increased export demand for dairy cows and also by the very good prices offered to farmers for F₁ heifers sired by bulls of the so-called "exotic" breeds on dairy cows.

The quality of our pork is recognized throughout both Canada and the United States. The efficiency of our broiler producers and their mastery of the techniques entitle them to recognition as "avant-garde" and to a high rating.

However, there is a shadow cast across this picture: Quebec produces only 40 per cent of the feed grains it needs or (to go into detail) 8.3 per cent of the barley and no more than 3.1 per cent of the wheat, the rest consisting mostly of oats. This means that this generally good-quality, healthy livestock, genetically improved thanks to constant efforts, has to be fed mainly with grain from elsewhere.

In effect, we are therefore dependent and at the mercy of drastic price variations and rising costs of transportation, labour, etc. To

avoid fluctuations, ensure increased stability, and obtain larger profits from our flocks and herds, our sole solution was to increasingly integrate our crop productions with our livestock productions.

Such an approach would have been but a pious hope only a few years ago. Indeed we do not have to go back many years to realize that we had very few species or varieties of high-yielding plants really adapted to our northern climate.

I need only mention grain corn; the first varieties which could adapt to the 2,700 heat units of the Montreal plain made their appearance less than 10 years ago. The varieties of high-yielding spring wheat, such as Opal and Pitic 62, were introduced on our farmlands two years ago.

We are well aware of our two serious limitations: our climate and the widely varying soils of our croplands (which have a total area of barely seven million acres).

But we were convinced that it was nevertheless possible for us, through a well conceived and planned program, to obtain a much higher yield from our arable land. The appearance of satisfactory new stocks of high-yielding species and varieties, suitable for our climate and enabling us to produce at very competitive costs, broadened our horizons.

In view of these promising prospects on the one hand and, on the other, being faced with the high cost of protein and our dependence on western feed grains, the Quebec Department of Agriculture decided

to take energetic steps to launch a big province-wide program with the overall aim of increasing the existing 40 per cent degree of feed self-sufficiency to 65 per cent within five years. This idea took root a year go. It became one of the big priorities of our ministry, the main underlying aims being the following:

- higher yields per acre
- greater crop diversity
- better integration of our crops with our livestock productions
- greater economic impact of our agriculture
- larger farm income.

Let us review the approaches advocated as early as 1972 to carry out this ambitious program.

1 — First of all, some obsolete and low-yielding crops had to be replaced as soon as possible by others in order to achieve higher production and thus free acreage for more suitable or complementary crops. I will give a few examples.

In Quebec we still grow about 800,000 acres of oats, a grain known for its ready adaptability but also for its low yields and low protein and T.D.N. content. Our grasslands (hay and pasture) occupy too much space — namely 5.4 million acres — from which we obtain barely the equivalent of two tons per acre of medium-quality hay. On this total of 6.2 million acres of grassland and oats, it was therefore necessary to substitute other kinds and varieties of plants and rapidly increase yields and productivity. That was one of our main concerns.

We decided to stop talking about oats and practically ignore it and, instead, to concentrate all our attention on promoting new high-yielding varieties of barley and wheat.

As regards grasslands, the emphasis would henceforth be on legumes — first and foremost alfalfa. We hoped in this way to double quality and quantity and redeem considerable acreages in order to grow (for example) silage corn, grain corn, and soybeans wherever the climate is suitable.

The campaign to redeem acreage and replace low-yielding plants by more advantageous ones was to be the object of concerted action and of directed planning with incentives. We will explain later the plan of action and strategy we have developed to attain the desired and anticipated results.

2 — Apart from re-establishing a better balance of the aforesaid crops, was any other action called for in the case of field crops? There certainly was.

First, we had to continue to promote the growing of grain corn, which — thanks to the new varieties — adapts very well to the climate of our Montreal plain. With earlier varieties and new techniques, the day will come when we shall be able to push the boundaries back considerably. In fact, it is probably the corn crop that made us fully aware of the grain potential which we had within our grasp and had only to exploit (with less difficulty than we feared at the start). After

a few years we even had, in many cases, yields comparable to those of Ontario, Iowa, and Kansas. Why? 1 — because our rainfall is much more uniform in the province of Quebec; 2 — when the temperature is over 86 degrees Fahrenheit, corn practically stops growing. We have few days as hot as that, whereas our neighbours to the south have long hot dry spells which often delay the growth of corn and so reduce the average yield.

We had just discovered a new reality: despite certain statements to the contrary, we were able to produce corn efficiently and profitably. Pessimists had either to hold their tongues or retract what they had said.

The same conclusions seem likely in the case of the new varieties of spring wheat which we now have. Our cool damp springs and long days greatly favour the tillering of early seedlings, and we have so far been getting almost astounding results.

Have we underestimated ourselves as regards grain growing? Are we about to re-live the grain corn story? The answer seems to be quite definitely yes.

However, I realize that I am digressing from the subject of corn. As I was saying, we want to keep on insisting on its production and profitability in the Montreal plain with a view to at least doubling, within the next five years, the 120,000 acres we already have.

As regards priority, which of our existing crops — apart from grain

we ever corn — would it be desirable to promote on the liberated acreage? Definitely silage corn, a plant that supplies us "par excellence" with total digestible nutrients at minimal cost. Thanks to new varieties, it is now possible to grow this crop in most regions of Quebec.

We shall also place special emphasis on soybeans. They will be grown in favourable areas in order to encourage their use on the farm. They will also serve to supply the new soybean meal plant which is to be built without delay and which will require an input of 600 to 1,000 tons a day.

In addition, we are paying attention to horse beans or faba beans. This plant is semi-indigenous to Quebec, where it has been grown for a long time, and it seems to adapt to all our climatic conditions. We have high hopes for this legume which could yield us 3,000 pounds of beans per acre with 29 per cent of protein.

You are aware of the present high cost of feed grains and continually rising transport and labour costs. As regards protein, its monetary value is quite astronomical. The self-sufficiency program is therefore imperative and most logical.

You may tell me "Yes, but if the situation became nearly normal, would there be any real profit in embarking on such a venture?" My answer is in the affirmative, without any hesitation. Our agricultural regions have already proved this time and again on a large number of farms. For

example, when corn was worth \$1.45 a bushel f.o.b. Montreal, a farmer who used his own ear-corn to make feed could easily save about \$12 to \$16 per ton. During the same period, by feeding high-moisture corn to pigs, returns could be increased by \$4 to \$6 per hog. In the case of poultry, this same type of corn resulted in a saving of up to \$20 per ton of feed or 88 cents per laying bird or five cents per dozen eggs.

Similar comparisons for the same period in the case of cereals such as barley and wheat show comparable savings on livestock enterprises with soil farming. The same applies to the use of soybeans in farm rations. At today's sky-high prices for grains and concentrates, just imagine the fantastic savings being made by farmers who have succeeded in integrating their crop and livestock productions.

We absolutely must close the success triangle of the livestock industry. By means of suitable programs, we already exercise very good control over its genetic aspect and also the health aspect. But we still have to close once and for all the third side of the triangle through improved feeding with the produce of our own farms. We must attain this objective without fail; otherwise we shall always be vulnerable. Without any question, the survival of our livestock industry depends upon it. Increased self-sufficiency will put us in a strong and competitive position.

We hope that, as we become more self-sufficient, we shall be able to develop certain livestock enterprises in which we are now deficient, such as beef. We shall shortly be introducing incentive programs in this field. These, simultaneously backed by a planned increase in silage corn, grains, and protein, could give a new impetus to beef. Henceforth, a high-energy finishing ration will be available.

With our new, better-adapted crop plants, we can now obtain yields comparable with those of our neighbours — and on land representing at the start only a half or one quarter of the investment. In view of this, we are at present persuaded of the immense possibilities of beef production in Quebec.

You may tell me that all this sounds very promising in theory but, at the same time, you may be wondering "Will the Department succeed? What steps will actually be taken? What tangible results are there to show after one year?"

We know that the task is a heavy one and the challenge great. But let me answer your questions and dispel your doubts. As you know, many of my colleagues and myself have spent some time in the fertilizer business. Quite frankly, in doing so, we got a good training in a number of fields, such as planning, target-setting, quotas, follow-up, quality control and also — to a certain extent — a willingness to accept risk, prompt reaction in the face of competition, profitability and price-cuts. We have therefore adopted and applied some of the same principles used in industry.

After having established the facts and identified the problems, we have worked out and defined a strategy of action. Briefly, it is as follows:

Firstly, with this specified priority in mind, our regional agricultural coordinators with their teams got down to business without delay and set themselves targets and quotas for each crop to be introduced or developed. Yes, at the Quebec Department of Agriculture, we too have the action-planning concept, P.P.B.S., and even M.B.O. (management by objectives) by which the performance of our field forces is rated. Furthermore, every three months, we receive from our agricultural regions a quantified M.I.S. (management information system) report and so far it has all worked wonderfully.

After a year in this crop production race, we are proud to tell you today that, in many sectors, we have surpassed the targets we set ourselves. An extremely significant case is that of alfalfa. This special project, known as "Operation Alfalfa" has really swept the province of Quebec and has led to the sale of 40 per cent more alfalfa seed than last year. At the same time, an excessive demand for barley and wheat seed led to a shortage of it in many regions.

Our intensive propaganda via the mass media — press, radio, tele-

vision — and also by means of farm days, field demonstrations, lectures, comparative budgets, etc. . . . , gave rise to a real vogue and evoked a tremendous response from the farmers.

We are proud of the success we have already achieved and enthusiastic about realizing our forecasts for 1978. Our quotas call for the following increases and development within five years:

Wheat — 138,429 more acres
Barley — 73,944 more acres
Grain corn — 117,341 more acres
Silage corn — 102,500 more acres
Alfalfa — 350,000 more acres
Soybeans — 38,000 more acres

You fertilizer people are going to benefit from all this. I can already see your eyes aglow with dollar signs. There is no doubt that this crop production drive will have a big effect on the sale and use of fertilizers.

We are counting on you to give us adequate help in two ways:
1 — by a wholesome propaganda for rational use of fertilizers with the new kinds and varieties we shall introduce. "Bigger yields" is as much as to say "more extensive use of fertilizer".

2 — as a corollary, we hope that this increased and thriving trade will make it easier for you to make large-scale purchases of raw materials at a lower price, and that your fixed costs will be spread over a larger number of tons and

that, thanks to a better use of your plant, you will be able, within reason, to stabilize your fertilizer prices to Quebec farmers.

In any case, we intend to follow with you this development which will open up new horizons for you, the manufacturers.

I hope, gentlemen, that, as regards field crops, I have succeeded in getting you to share — not our hope — but our certainty of success. Briefly, we feel sure that, with the relatively low cost of our land, the new species and varieties of crops introduced into the province of Quebec and our information and aid to farmers, the priority being given to self-sufficiency will change the face of our agriculture. We shall then enjoy stability, greater competitive power, and guaranteed profitability.

I should like to turn now to horticultural and specialized crops. According to the 1970 figures, our returns in this sector were as follows:

Various vegetables — \$18,250,000
Small fruits — \$500,000
Apples — \$4,000,000
Potatoes — \$12,500,000

We have two types of programs suited to two different aspects of these productions:

1 — Diversification and stimulation of certain productions.

We are decidedly deficient in some crops, for example: asparagus, Brussels sprouts, broccoli,

and hot-house tomatoes. The Quebec Department of Agriculture is making a big effort to take inventory of the available soils and areas with a view to promoting or introducing these crops — which would bring in appreciable added returns. The Department's team is at work and we are giving the matter our most serious consideration.

2 — Aid and marketing.

We have some potato marketing problems. We are giving them very close attention and will soon be in a position to take energetic action. On the other hand we have a surplus of certain products such as carrots, onions and apples. We also have problems with regards to freshness, for instance in the case of strawberries and lettuce. Being aware of all these aspects and kept informed by specialists, the departmental authorities decided two years ago to devote considerable effort and funds to them.

I will mention here only the vigorous action taken with regard to carrots, namely a grant of up to \$100,000 per grower for the construction of jacketed storages to keep carrots in perfect condition until May and so obtain top prices for them.

The Department has also helped to install vacuum coolers for lettuce and hydro-ice coolers for sweet corn, radishes, spinach, etc., in strategic locations. Strawberry cooling tunnels have brought about more uniform market supply, higher

prices and better quality and taste. Backed by suitable publicity, the Quebec Department of Agriculture is also concerned with controlled atmosphere storage for apples. This program has had excellent results. In the field of horticulture and specialized crops, things are on the move in "la Belle Province".

The Department intends to go still further and to intensify its action and performance in the agriculture-food sector, a most essential link in increasing secondary agricultural industry and hence the local impact of farming.

In conclusion, gentlemen, I would like to emphasize that we are counting on your cooperation as well as on that of universities, experimental farms, specialists, and agricultural and para-agricultural industries, so that, together, we can take part in a spirit of harmony in this development and enable our agriculture to provide the Quebec producer with an income which can be compared favourably with that of other classes of our society.

This Month with the

Q.W.I.

F.W.I.C. Convention

A report by Q.W.I. President Mrs. J. W. Westover on the F.W.I.C. Convention has been sent to all the branches. From Mrs. Westover's report it certainly sounds as if the setting was beautiful, the business end of the Convention gratifying, if somewhat tiring, and the entertainment most enjoyable. The following are a few excerpts from her report:

"... The following discussion was most interesting to Quebec, as we are in the process of up-dating our by-laws, etc. Mrs. Beilish remarked, 'Policy can be changed by a motion at the Board meeting, only long-term items should be put into the by-laws. Policy is the bones of the Women's Institute, what we do and plan to do. Time and time again we wonder why some items were written into by-laws. In this time and age we must be able to make changes. It is a good idea to have different coloured pages in the handbook for Policy, By-Laws, Duties of Officers, of Conveners, etc.' . . .

"Size of National Board: A good deal of discussion took part over this. Many thought the National Board was over-loaded. It is not possible to write all this down, but the new By-Laws Committee will have a lot more concrete ideas to go by for the change in Board members for F.W.I.C.

"... I am pleased to report 'The Apple Cookbook' chosen as Quebec's representation was quite a hit. Only two of the provinces' presentations (New Brunswick and Quebec) made the daily Alberta

newspaper. We were all pleased about this . . .

"Tweedsmuir Competitions: We had three entries from Quebec — A Village History from Beebe, Quebec; a set of slides from Argenteuil County, and a Macramé Tote Bag from Megantic County. Although we did not win any prizes, the entries were all good, and I hope more branches will compete next conference.

"Gift Stall: \$2,057.51 was realized from this . . . The maple syrup and syrup products were all bought up the first day.

"The membership drive was won, both branch and province by Newfoundland with 160 per cent and eight per cent over all other provinces.

"Tweedsmuir competition: Village History won by Gimli, Manitoba; Set of Slides by Robsart branch, Saskatchewan, and Macramé Tote Bag by Clearview, Alberta.

"Next F.W.I.C. Conference will be held in Prince Edward Island in 1976.

"Gift of a picture was presented to retiring president, Mrs. Fulton, also a Life Membership pin in F.W.I.C. A memento of appreciation was given Mrs. Kozdrowski, retiring editor of Federated News, also to Mrs. R. Jamieson for all the extra work she has so cheerfully undertaken at the office . . ."

Excerpts from Conveners' Presentations

Agriculture and Canadian Industries: Mrs. D. McInnis — Agriculture today is more important in

Canada than ever before in history, except in the Hungry Thirties. Today with our higher standards of living, cheap food is wanted and some people are under-nourished. Why? We are working less, driving more, eating more but the wrong kinds of food. More and more land is being given over for urban development; farmers are competing against industry for help. Where is food going to come from; who is going to produce? Present farmers have to be given more initiative and adequate returns on investments and for labour. Farmers cannot survive without the consumer, but the consumer cannot survive without the farmer. A better understanding is needed between them.

Citizenship and Education: Mrs. Carmen Inglis — A survey in Canada has shown that alcohol is involved in more than 50 per cent of accidents in Canada. An old warning is when you are driving and have had a drink that one drink may steer you wrong. You may think you are driving well but are missing important signals. Pamphlets on alcohol are available in every province. You can never tell when one for the road may be one for the grave. A challenge is before us. We can solve problems if we talk about them. Let your voice be heard. A large majority of the W.I. members across Canada do not wish to see marijuana legalized.

Health and Home Economics: Mrs. Lewis Northey — There is a disturbing increase in the number of emotionally disturbed children entering kindergarten and first grade. Causes? Breakdown in family life, too much freedom,

confusion in the role of parents, baby sitters, day care centres, lack of security, child unwanted and unloved, malnutrition.

Venereal disease is on an alarming increase. It is Canada's most urgent communicable disease problem. To combat this problem we need education through all available media and the enactment of legislation to permit treatment without parental knowledge.

Cultural activities: Mrs. E. R. James — New ideas are needed to draw younger people. Did you ever try a knit-a-thon? Have you tried creative writing? What about learning about our pioneers, our country, and its people? Learn about our different ethnic groups — their way of life, music, and dances.

United Nations and International Exchanges: Mrs. S. McBride — Save the Children's Eyesight has been the number one project this year and A.C.W.W. members have pledged themselves to help this project. Women have to fight their battles in different ways so A.C.W.W. fights with pennies. A roll call: What is A.C.W.W.'s part in the United Nations? A motto: Peace will come when the power of love is greater than the love of power.

Twining with the provinces has been a great success. A great many women have become better acquainted with other parts, people, and customs in Canada through pen pals, branch links, booklets, scrap books and slides as well as interprovincial and private visits to their sister province. The international exchange program has

doubled itself this past year. So much real knowledge can be had by shaking hands across the seas which is a small step toward international understanding and good will.

The F.W.I.C. broom is different. Its straws are education, knowledge, action, communication, good nutrition, and physical fitness. It is the conveners' challenge to plan programs geared to help sweep away the unwanted elements affecting the health and home environment of our citizens.

Happy Birthday!

Roses were blooming and it was birthday month for 19 seniors at the Wales Home in Richmond. Taking their turn at the monthly birthday party, the **Melbourne Ridge W.I.** brought the scent and beauty of these flowers to the party as they decorated cake plates, filled vases for the long table, topped the two wild strawberry-filled birthday cakes with miniature vases of roses, and pinned roses on each guest of honour.

Nurses had helped each guest get ready for the party. During the year the W.I. members had contributed suitable gifts and prizes and these were brought to the Home. Bingo was played with one committee member calling the numbers while the other three helped the less fortunate members play the game. Along with the lighted birthday cakes, the guests were delighted to find homemade bread, cheese, and fancy breads. Those in the Infirmary were not forgotten as a plate of food and a gift was taken to each guest there. The seniors usually ask for a

"bite" to take back to their roommate so packages of cookies had been prepared for each one. This time the presence of unexpected visitors at the party made it necessary to serve the cookies at the table (about 36 were served), but there was enough food for all. The guests left the party full, happy, and glad they didn't have to go for supper.

For many years this W.I. has donated jams, pickles, and cookies to the Hospitality Shop at the Home where, on Tuesday and Friday afternoons, the members take turns with other branches and organizations. Two stay at the Shop and two go all over the Infirmary with a cart. Every Friday afternoon two women from a group serve tea and cookies to residents and their guests. A food sale was planned for August with everything to be done up in small quantities — small loaves, small rolls, small pies, etc.

A.C.W.W. 14th Triennial Conference

All members wishing to avail themselves of this trip and attend this conference at Perth, Western Australia, on October 8 to morning of October 18, 1974, are urged to send for registration forms to: Associated Countrywomen of the World, 50 Warwick Square, Victoria, London, SWIV 2AJ, England. These are available for Societies' delegates, voting and non-voting, and accredited visitors, non-voting.

It is advisable to get these registrations in as early as possible as space will be at a premium.

Excellent Speakers

The June meeting of the Abbotsford branch (Rouville Co.) was very well attended. The regular business was brief so as to give more time to the guest speakers. Mrs. W. Rayson, President, called on Mrs. D. Ross (Convener, Welfare and Health), who introduced Mr. D. Hoe, Co-ordinator for Youth Work, and Mr. and Mrs. A. Devlin (House Parents), who spoke on their work at the Half-Way House in Rosemere.

Mr. Hoe spoke on the "Effectiveness of Youth Work" and told the group a great deal about the Boys Farm and Training School at Shawbridge. It is the only institution of its kind in Canada. When the boys are sent to the Farm, a lengthy and thorough interview is held and special treatment programs are planned. Counsellors, most of whom are young, work extremely hard to help a lad not to be a delinquent any longer. It takes time — usually about two years. Most of the boys are not wanted in foster homes. When a boy leaves the Boys' Farm, he goes to a Community Counsellor. There are two Community Project Centres in Montreal. After 18 years of age the boys cannot be kept unless they ask for more help. If they do, they can be helped until they are 21.

There are two Half-Way Houses, one in Rosemere and one in St. Laurent. Workers are diagnosed and matched up to the boys they are to work with. There are two sets of House Parents.

Mr. and Mrs. Devlin told about their work as House Parents at Rosemere where they care for

between five and eight boys. The boys must go to school in order to stay at Half-Way House, but they do odd jobs in the community on weekends. Those who go out on summer jobs must return for school in September. The boys are given a \$5 a week allowance and also \$11 per month for clothing. They do their own washing and ironing and take turns washing the dishes.

There is a waiting list from the Boys' Farm for the Half-Way Houses but the boys cannot make the change until they are emotionally prepared.

These most interesting speakers were thanked by Mrs. Ross. Light refreshments were served.

A Busy Summer

Stanstead County's five branches had a busy summer. Hatley branch entered a float, Song of the Lazy Farmer, in the Dominion Day celebration and won first prize in the adult class. Congratulations to Mrs. W. Shaw, the lazy farmer's wife and to Mrs. Burnham.

Stanstead North branch entered a float in the Municipality of Beebe Centennial Day celebrations held on July 1. Their float depicted the red brick schoolhouse where an Institute meeting was taking place. Beebe branch had a trip to Stanbridge East to visit the museum. The County meeting was hosted by the Beebe branch on August 8. It was a very busy session with entertainment by Percy Fellows from Derby, Vermont, who came and showed a film he had made. Titled Nature's Scrapbook, it featured the four seasons, birds, animals, and flowers.

County members participated in the Tea Room project at the three-day Ayers Cliff fair in August. For 35 cents they served light refreshments with each branch taking their hours. This was under the Chairmanship of Mrs. John Johnston. There was also a sale table of home crafts and homemade foods. The profits are always good but little is realized from the tea room. It is another way to advertise Institute and to do something for Home and Country.

On September 15 the 58th annual school fair took place at Ayers Cliff. This year flower and vegetable seeds were purchased (value of \$172) and distributed to the Stanstead County school students. They planted the seeds and tended them in the summer then exhibited them at the fair. Last year there were 919 exhibits.

A Prize Winner

The Bury W.I. (Compton Co.) float in the annual Canada Day Celebration at Bury was a first-prize winner in its class. The float was an 18-foot hayrack drawn by a tractor with an "apron" of white paper, 18 inches wide, stapled around the rack. Blue foil letters formed the words Bury W.I. on the front and back, while on the sides similar lettering proclaimed "We've Come a Long Way, Baby."

Eight-foot paintings, done in poster paints, portrayed the homes of three eras. The first depicted the Stone Age. The background was most realistic cave opening, the floor a grass green carpet. A caveman in furs, club in hand with one foot on a rock (another huge rock was nearby), was standing over a recumbent girl, similarly

dressed, "unconscious", whom he was about to drag by her fair hair into the cave.

The second was the Enslavement of Women, which occupied the centre part of the float. It showed a rough board floor, one wall as stonework, the other a huge fireplace with old kettles and tools in front of it. A woman in dust cap and suitable garments was bent over a wash tub and scrub board. There were several children (big doll in cradle), with a couple of children hanging to Mother's skirts; one child rocking another in an old rocker; a couple of children playing on the floor. The children were barefooted with suitable clothing.

The third was the Emancipation of Women. This depicted a modern, white-walled office with a framed slogan "Sisterhood is Power."

Seated at the office desk of Mr. President in modern dress was the lady president dictating to the secretary, a man with greying hair.

The theme was the brainchild of Joyce Dougherty, gifted daughter of Mrs. Stewart Dougherty, a Bury member. Both these women did most of the work assembling the float, even cutting out all those letters, which was no small job. The huge paintings were done by another member, Mrs. Robert Fitzsimmons, who is an English teacher at Alexander Galt Regional School and also an outstanding Guide Captain.

Dear W.I. Members:

After a pleasant day spent at Hemmingford's Apple Festival, I was deeply impressed by the

involvement of their W.I. and its members in the community celebrations and by the pamphlets which had been prepared for visitors to their special 50th anniversary display of the local W.I. achievements. The display was next to their handicraft display and sale. This splendid little pamphlet lists activities and achievements including some of the many projects and interests both past and present. It also informs the reader of the purposes and objectives of Women's Institutes and its continuing appeal to country women. The Apple Cookbook was still selling well — sales no doubt being spurred on by the delicious apple pies we tasted.

Four of the seven Q.W.I. members who represented us at the F.W.I.C. Convention in Banff are members of the Lachute branch. At their

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meeting in a cottage at Clear Lake, Mrs. George McGibbon commented on the generous donations to the Sale Table from our Quebec branches, especially the maple syrup and maple sugar which sold so quickly. She also said that the membership drive is continuing for the next triennium.

Many W.I. meetings were held at cottages this summer — typical is **East Clifton's** report: The evening song sparrows were singing their songs of praise as the members listened and feasted their eyes on the beauty of the evergreen forest beside the pond. "Friendship" was a fitting theme of this meeting.

My first real interest in W.I. started while attending a W.I. convention at the age of 14. **Wright** had four girls under 12 years of age attend their joint meeting with the Anglican Church women (where each group took turns with a business session before enjoying lunch and a social hour). Will these girls become future members?

Tours . . . **Frontier** and **Pioneer** to the Thousand Islands; **Abbotsford** to see wood carving at Granby; **Brownsburg** and **Dalesville-Louisa** to the Apple Festival at Hemmingford; 49 members and husbands of **Sherbrooke County** visited the Earl Moore Canadiana Village in Rawdon; **Howick** toured the Leslie Rennie Museum; **Waterloo-Warden** the Clairol Plant in Knowlton; **Gore** took a scenic drive into Drummond and Bagot Counties. Picnics were held for members, guests and children at **Spooner Pond** and **Beechgrove**.

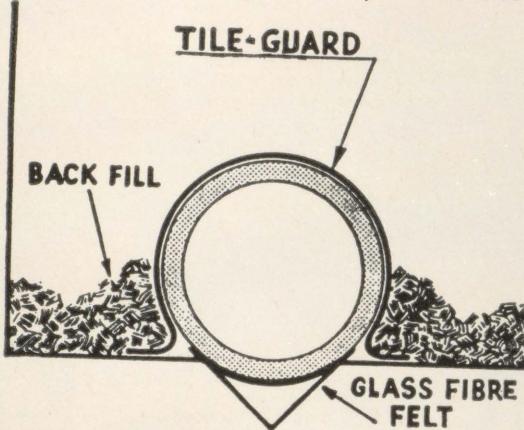
Beechgrove went on another kind of tour — a recent roll call was what do you know about this country? The names of various countries were drawn from a hat and many interesting talks, filled with facts about the countries, evolved. First prize went to the speaker on France, second on China, and third winner was a visitor from the United States who spoke on Mexico.

For the busy fall days ahead I find **Granby Hill's** motto fitting: A good laugh is sunshine in the home.

Mrs. Perley Clark,
Q.W.I. Publicity Convener.

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